

AMENDMENTS TO THE CLAIMS

Claim 1. (Original): A transmission power control method characterized in that:

reception quality of a signal transmitted from a remote station is compared with a control target value, and the comparison result is used for the transmission power control on the remote stations; and

it is checked whether a frame error exists in the received signal, the control target value is increased if a frame error is detected, and the control target value is gradually decreased if no frame error is detected.

Claim 2. (Original): A transmission control method characterized in that:

a channel is established between a mobile station and a base station, reception quality of a signal transmitted from the base station is compared with a control target value in the mobile station, and the comparison result is used for transmission power control on the base station; and

the mobile station checks whether a frame error exists in the receive signal, increases the control target value if a frame error is detected, and gradually decreases the control target value if no frame error is detected.

Claim 3. (Original): A transmission control method characterized in that:

a channel is established between a mobile station and a base station, reception quality of a signal transmitted from the mobile station is compared with a control target value in the base station, and the comparison result is used for transmission power control on the mobile station; and

the base station checks whether a frame error exists in the received signal, increases the control target value if a frame error is detected, and gradually decreases the control target value if no frame error is detected.

Claim 4. (Original): A transmission power control method characterized in that:

diversity synthesis of signals transmitted from one or a plurality of remote stations is performed, reception quality of a synthesized signal is compared with a control target value, and the comparison result is used for transmission power control on the one or the plurality of remote stations; and

it is checked whether a frame error exists in the synthesized signal, the control target value is increased if a frame error is detected, and the control target value is gradually decreased if no frame error is detected.

Claim 5. (Original): A transmission power control method characterized in that:

a channel is established between a mobile station and one or a plurality of base stations, the mobile station performs diversity synthesis of signals transmitted from one or a plurality of base stations, reception quality of a synthesized signal is compared with a control target value, and the comparison result is used for transmission power control on the one or the plurality of base stations; and

the mobile station checks whether a frame error exists in the received signal, increases the control target value if a frame error is detected, and gradually decreases the control target value if no frame error is detected.

Claim 6. (Original): A transmission power control method characterized in that:

a channel is established between a mobile station and one or a plurality of base stations, reception quality of a signal transmitted from the mobile station is compared with a control target value in the one or the plurality of base stations, and the comparison result is used for transmission power control on the mobile station;

each of the one or the plurality of base stations checks whether a frame error exists in the signal, and notifies a control station of the check result; and

the control station uses the check result to determine the presence/absence of a frame in which no error is detected, increases the control target value if the determination result indicates that there is no frame in which no error is detected, gradually decreases the control target value if the determination result indicates that there is a frame in which no error is detected, and notifies each of the one or the plurality of base stations of the control target value after updating.

Claim 7. (Original): A transmission power control method characterized in that:

a channel is established between a mobile station and one or a plurality of base stations, reception quality of a signal transmitted from the mobile station is compared with a control target value in the one or the plurality of base stations, and the comparison result is used for transmission power control on the mobile station;

each of the one or the plurality of base stations checks whether a frame error exists in the signal, and notifies a control station of the check result;

the control station uses the check result to determine the presence/absence of a frame in which no error is detected, and notifies each of the one and the plurality of base stations of the determination result; and

each of the one or the plurality of base stations increases the control target value if the notified determination result indicates that there is no frame in which no error is detected, and gradually decreases the control target value if the determination result indicates that there is a frame in which no error is detected.

Claim 8. (Original): A transmission power control method characterized in that:

a channel is established between a mobile station and one or a plurality of base stations, reception quality of a signal transmitted from the mobile station is compared with a control target value in the one or the plurality of base stations, and the comparison result is used for transmission power control on the mobile station;

each of the one or the plurality of base stations checks whether a frame error exists in the signal, and notifies a control station of the check result;

the control station determines, on the basis of the check result, the presence/absence of a frame in which no error is detected, and if there is no frame in which no error is detected, notifies each of the one or the plurality of base stations of the determination result; and

each of the one or the plurality of base stations increases the control target value if it is notified of the determination result, and gradually decreases the control target value if it is not notified of the determination result.

Claim 9. (Original): A transmission power control method characterized in that:

a channel is established between a mobile station and one or a plurality of base stations, reception quality of a signal transmitted from the mobile station is compared with a control target value in the one or the plurality of base stations, and the comparison result is used for transmission power control on the mobile station;

each of the one or the plurality of base stations checks whether a frame error exists in the signal, and notifies a control station of the check result;

the control station notifies the one or the plurality of base stations of all check results notified from the one or the plurality of base stations or all check results except for a check result from a self-station; and

each of the one or the plurality of base stations determines, on the basis of the check result, the presence/absence of a frame in which no error is detected, increases the control target value if there is no frame in which no error is detected, and gradually decreases the control target value if there is a frame in which no error is detected.

Claim 10. (Original): A transmission power control method characterized in that:

a channel is established between a mobile station and one or a plurality of base stations, reception quality of a signal transmitted from the mobile station is compared with a control target value in the one or the plurality of base stations, and the comparison result is used for transmission power control on the mobile station; and

a control station performs diversity synthesis of signals received from the one or the plurality of base stations, checks whether a frame error exists in a synthesized signal, increases the control target value if a frame error is detected, and gradually decreases the control target value if no frame error is detected.

Claim 11. (Original): A transmission power control method characterized in that:

a channel is established between a mobile station and one or a plurality of base stations, reception quality of a signal transmitted from the mobile station is compared with a control target value in the one or the plurality of base stations, and the comparison result is used for transmission power control on the mobile station;

each of the one or the plurality of base stations sends a signal received from the mobile station to a control station;

the control station performs diversity synthesis of reception signals sent from the respective base stations, checks whether a frame error exists in the synthesized signal, and notifies each of the one or the plurality of base stations of the check result; and

each of the one or the plurality of base stations increases the control target value if the check result indicates that a frame error is detected, and gradually decreases the control target value if no frame error is detected.

Claim 12. (Original): A transmission power control method characterized in that:

a channel is established between a mobile station and one or a plurality of base stations, reception quality of a signal transmitted from the mobile station is compared with a control target value in the one or the plurality of base stations, and the comparison result is used for transmission power control on the mobile station;

each of the one or the plurality of base stations sends a signal received from the mobile station to a control station;

the control station performs diversity synthesis of reception signals sent from each of the one or the plurality of base stations, checks whether a frame error exists in the synthesized signal, and if a frame error is detected, notifies each of the one or the plurality of base stations of the result; and

each of the one or the plurality of base stations increases the control target value if the notification is received, and gradually decreases the control target value if the notification is not received.

Claim 13. (Previously presented): A transmission power control method according to claim 1, characterized in that:

if a frame error is detected, the control target value is increased; and

if no frame error is detected, the control target value is gradually decreased to match channel quality to a channel quality target value.

Claim 14. (Previously presented): A transmission power control method according to claim 1, characterized in that:

if a frame error is detected, the control target value is increased; and

if no frame error is detected, the control target value is gradually decreased to match a frame error rate to a channel quality target value.

Claim 15. (Previously presented): A transmission power control method according to claim 1, characterized in that

if a frame error is detected, the control target value is increased by a first predetermined value; and

if no frame error is detected, the control target value is gradually decreased such that the control target value is decreased by the first predetermined value in an average time during which a frame error is detected when a frame error rate is set to a desired value.

Claim 16. (Previously presented): A transmission power control method according to claim 1, characterized in that:

if a frame error is detected, the control target value is increased by a first predetermined value; and

if no frame error is detected, the control target value is gradually decreased such that the control target value is decreased by the first predetermined value while frames fewer than a reciprocal of a channel quality target value based on a frame error rate by one are received.

Claim 17. (Previously presented): A transmission power control method according to claim 1, characterized in that:

if a frame error is detected, the control target value is increased by a first predetermined value, and if no frame error is detected, the control target value is decreased by a second predetermined value; and

a ratio of the first predetermined value to the second predetermined value is determined in accordance with a channel quality target value.

Claim 18. (Previously presented): A transmission power control method according to claim 1, characterized in that:

if a frame error is detected, the control target value is increased by a first predetermined value, and if no frame error is detected, the control target value is decreased by a second predetermined value; and

a ratio of the first predetermined value to the second predetermined value is determined in accordance with a channel quality target value based on a frame error rate.

Claim 19. (Previously presented): A transmission power control method according to claim 1, characterized in that:

if a frame error is detected, the control target value is increased by a first predetermined value, and if no frame error is detected, the control target value is decreased by a second predetermined value; and

a ratio of the first predetermined value to the second predetermined value is set to a reciprocal of a channel quality target value based on a frame error rate.

Claim 20. (Previously presented): A transmission power control method according to claim 1, characterized in that:

if a frame error is detected, the control target value is increased by a first predetermined value, and if no frame error is detected, the control target value is decreased by a second predetermined value; and

a ratio of the first predetermined value to the second predetermined value is set to a value smaller than a reciprocal of a channel quality target value based on a frame error rate by one.

Claim 21. (Previously presented): A transmission power control method according to claim 1, characterized in that:

if a frame error is detected, the control target value is increased by a first predetermined value, and if no frame error is detected, the control target value is decreased by a second predetermined value; and

a product of a channel quality target value based on a frame error rate and the first predetermined value is set as the second predetermined value.

Claim 22. (Previously presented): A transmission power control method according to claim 1, characterized in that:

if a frame error is detected, the control target value is increased by a first predetermined value, and if no frame error is detected, the control target value is decreased by a second predetermined value; and

a product of a channel quality target value based on a frame error rate and the first predetermined value is equal to a product of a value smaller than one by a channel quality target value based on a frame error rate and the second predetermined value.

Claims 23. (Original): A transmission power control apparatus characterized in that:

reception quality of a signal transmitted from a remote station is compared with a control target value, and the comparison result is used for transmission power control on the remote station; and

it is checked whether a frame error exists in the signal, the control target value is increased if a frame error is detected, and the control target value is gradually decreased if no frame error is detected.

Claim 24. (Original): A transmission power control apparatus characterized in that:

diversity synthesis of signals transmitted from a plurality of remote stations is performed, reception quality of a synthesized signal is compared with a control target value, and the comparison result is used for transmission power control on the plurality of remote stations; and

it is checked whether a frame error exists in the synthesized signal, the control target value is increased if a frame error is detected, and the control target value is gradually decreased if no frame error is detected.

Claim 25. (Previously presented): A transmission power control apparatus according to claim 23, characterized in that:

if a frame error is detected, the control target value is increased, and

if no frame error is detected, the control target value is gradually decreased to match channel quality to a channel quality target value.

Claim 26. (Previously presented): A transmission power control apparatus according to claim 23, characterized in that:

if a frame error is detected, the control target value is increased; and

if no frame error is detected, the control target value is gradually decreased to match a frame error rate to a channel quality target value.

Claim 27. (Previously presented): A transmission power control apparatus according to claim 23, characterized in that:

if a frame error is detected, the control target value is increased by a first predetermined value, and

if no frame error is detected, the control target value is gradually decreased such that the control target value is decreased by the first predetermined value in an average time during which a frame error is detected when a frame error rate is set to a desired value.

Claim 28. (Previously presented): A transmission power control apparatus according to claim 23, characterized in that:

if a frame error is detected, the control target value is increased by a first predetermined value; and

if no frame error is detected, the control target value is gradually decreased such that the control target value is decreased by the first predetermined value while frames fewer than a reciprocal of a channel quality target value based on a frame error rate by one are received.

Claim 29. (Previously presented): A transmission power control apparatus according to claim 23, characterized in that:

if a frame error is detected, the control target value is increased by a first predetermined value, and if no frame error is detected, the control target value is decreased by a second predetermined value; and

a ratio of the first predetermined value to the second predetermined value is determined in accordance with a channel quality target value.

Claim 30. (Previously presented): A transmission power control apparatus according to claim 23, characterized in that:

if a frame error is detected, the control target value is increased by a first predetermined value, and if no frame error is detected, the control target value is decreased by a second predetermined value; and

a ratio of the first predetermined value to the second predetermined value is determined in accordance with a channel quality target value based on a frame error rate.

Claim 31. (Previously presented): A transmission power control apparatus according to claim 23, characterized in that:

if a frame error is detected, the control target value is increased by a first predetermined value, and if no frame error is detected, the control target value is decreased by a second predetermined value; and

a ratio of the first predetermined value to the second predetermined value is set to a reciprocal of a channel quality target value based on a frame error rate.

Claim 32. (Previously presented): A transmission power control apparatus according to claim 23, characterized in that:

if a frame error is detected, the control target value is increased by a first predetermined value, and if no frame error is detected, the control target value is decreased by a second predetermined value; and

a ratio of the first predetermined value to the second predetermined value is set to a value smaller than a reciprocal of a channel quality target value based on a frame error rate by one.

Claim 33. (Previously presented): A transmission power control apparatus according to claim 23, characterized in that:

if a frame error is detected, the control target value is increased by a first predetermined value, and if no frame error is detected, the control target value is decreased by a second predetermined value; and

a product of a channel quality target value based on a frame error rate and the first predetermined value is set as the second predetermined value.

Claim 34. (Previously presented): A transmission power control apparatus according to claim 23, characterized in that:

if a frame error is detected, the control target value is increased by a first predetermined value, and if no frame error is detected, the control target value is decreased by a second predetermined value; and

a product of a channel quality target value based on a frame error rate and the first predetermined value is equal to a product of a value smaller than one by a channel quality target value based on a frame error rate and the second predetermined value.

Claim 35. (Original): A mobile station characterized in that:

reception quality of a signal transmitted from a base station is compared with a control target value, and the comparison result is used for transmission power control on the base station; and

it is checked whether a frame error exists in the signal, the control target value is increased if a frame error is detected, and the control target value is gradually decreased if no frame error is detected.

Claim 36. (Original): A mobile station characterized in that:

diversity synthesis of signals transmitted from one or a plurality of base stations is performed, reception quality of a synthesized signal is compared with a control target value, and the comparison result is used for transmission power control on the one or the plurality of base stations; and

it is checked whether a frame error exists in the synthesized signal, the control target value is increased if a frame error is detected, and the control target value is gradually decreased if no frame error is detected.

Claim 37. (Previously presented): A mobile station according to claim 35, characterized in that if a frame error is detected, the control target value is increased, and if no frame error is detected, the control target value is gradually decreased to match channel quality to a channel quality target value.

Claim 38. (Previously presented): A mobile station according to claim 35, characterized in that:

if a frame error is detected, the control target value is increased, and

if no frame error is detected, the control target value is gradually decreased to match a frame error rate to a channel quality target value.

Claim 39. (Previously presented): A mobile station according to claim 35, characterized in that:

if a frame error is detected, the control target value is increased by a first predetermined value; and

if no frame error is detected, the control target value is gradually decreased such that the control target value is decreased by the first predetermined value in an average time during which a frame error is detected when a frame error rate is set to a desired value.

Claim 40. (Previously presented): A mobile station according to claim 35, characterized in that:

if a frame error is detected, the control target value is increased by a first predetermined value; and

if no frame error is detected, the control target value is gradually decreased such that the control target value is decreased by the first predetermined value while frames fewer than a reciprocal of a channel quality target value based on a frame error rate by one are received.

Claim 41. (Previously presented): A mobile station according to claim 35, characterized in that:

if a frame error is detected, the control target value is increased by a first predetermined value, and if no frame error is detected, the control target value is decreased by a second predetermined value; and

a ratio of the first predetermined value to the second predetermined value is determined in accordance with a channel quality target value.

Claim 42. (Previously presented): A mobile station according to claim 35, characterized in that:

if a frame error is detected, the control target value is increased by a first predetermined value, and if no frame error is detected, the control target value is decreased by a second predetermined value; and

a ratio of the first predetermined value to the second predetermined value is determined in accordance with a channel quality target value based on a frame error rate.

Claim 43. (Previously presented): A mobile station according to claim 35, characterized in that:

if a frame error is detected, the control target value is increased by a first predetermined value, and if no frame error is detected, the control target value is decreased by a second predetermined value; and

a ratio of the first predetermined value to the second predetermined value is set to a reciprocal of a channel quality target value based on a frame error rate.

Claim 44. (Previously presented): A mobile station according to claim 35, characterized in that:

if a frame error is detected, the control target value is increased by a first predetermined value, and if no frame error is detected, the control target value is decreased by a second predetermined value; and

a ratio of the first predetermined value to the second predetermined value is set to a value smaller than a reciprocal of a channel quality target value based on a frame error rate by one.

Claim 45. (Previously presented): A mobile station according to claim 35, characterized in that:

if a frame error is detected, the control target value is increased by a first predetermined value, and if no frame error is detected, the control target value is decreased by a second predetermined value; and

a product of a channel quality target value based on a frame error rate and the first predetermined value is set as the second predetermined value.

Claim 46. (Previously presented): A mobile station according to claim 35, characterized in that:

if a frame error is detected, the control target value is increased by a first predetermined value, and if no frame error is detected, the control target value is decreased by a second predetermined value; and

a product of a channel quality target value based on a frame error rate and the first predetermined value is equal to a product of a value smaller than one by a channel quality target value based on a frame error rate and the second predetermined value.

Claim 47. (Original): A base station characterized in that:

reception quality of a signal transmitted from a mobile station is compared with a control target value, and the comparison result is used for transmission power control on the mobile station; and

it is checked whether a frame error exists in the signal, the control target value is increased if a frame error is detected, and the control target value is gradually decreased if no frame error is detected.

Claim 48. (Original): A base station characterized in that:

reception quality of a signal transmitted from a mobile station is compared with a control target value, and the comparison result is used for transmission power control on the mobile station;

It is checked whether a frame error exists in the signal, and a control station is notified of the check result; and

the control station uses the check result to determine the presence/absence of a frame in which no error is detected, increases the control target value if there is no frame in which no error is detected, and gradually decreases the control target value if there is a frame in which no error is detected.

Claim 49. (Original): A base station characterized in that:

reception quality of a signal transmitted from a mobile station is compared with a control target value, and the comparison result is used for transmission power control on the mobile station;

it is checked whether a frame error exists in the signal, and a control station is notified of the check result; and

a determination result on the presence/absence of a frame in which no error is detected, which is based on the check result, is received from the control station, the control target value is increased if the determination result indicates that there is no frame in which no error is detected, and the control target value is gradually decreased if the determination result indicates that there is a frame in which no error is detected.

Claim 50. (Original): A base station characterized in that:

reception quality of a signal transmitted from a mobile station is compared with a control target value, and the comparison result is used for transmission power control on the mobile station;

it is checked whether a frame error exists in the signal, and a control station is notified of the check result; and

a determination result indicating that there is no frame in which no error is detected is received from the control station; and

the control target value is increased if the base station is notified of the determination result, and the control target value is gradually decreased if the base station is notified of the determination result.

Claim 51. (Original): A base station characterized in that:

reception quality of a signal transmitted from a mobile station is compared with a control target value, and the comparison result is used for transmission power control on the mobile station;

it is checked whether a frame error exists in the signal, and a control station is notified of the check result;

all check results from the one or the plurality of base stations or all check results except for a check result from the self-station are received from the control station; and

the presence/absence of a frame in which no error is detected is determined on the basis of the check results, the control target value is increased if there is no frame in which no error is detected and the control target value is gradually decreased if there is a frame in which no error is detected.

Claim 52. (Original): A base station characterized in that:

reception quality of a signal transmitted from a mobile station is compared with a control target value, and the comparison result is used for transmission power control on the mobile station;

the signal received from the mobile station is sent to a control station; and

the control station checks whether a frame error exists in a signal obtained by diversity synthesis of reception signals sent from one or a plurality of base stations, the control target value is increased if a frame error is detected, the control target value is gradually decreased if no frame error is detected, and the updated control target value is received from the control station.

Claim 53. (Original): A base station characterized in that:

reception quality of a signal transmitted from a mobile station is compared with a control target value, and the comparison result is used for transmission power control on the mobile station;

the signal received from the mobile station is sent to a control station;

the control station checks whether a frame error exists in a signal obtained by diversity synthesis of reception signals sent from one or a plurality of base stations, and the check result is received from the control station; and

the control target value is increased if the check result indicates that a frame error is detected, and the control target value is gradually decreased if the check result indicates that no frame error is detected.

Claim 54. (Original): A base station characterized in that:

reception quality of a signal transmitted from a mobile station is compared with a control target value, and the comparison result is used for transmission power control on the mobile station;

the signal received from the mobile station is sent to a control station;

the control station checks whether a frame error exists in a signal obtained by diversity synthesis of reception signals sent from one or a plurality of base stations, and a notification indicating that a frame error is detected is received from the control station; and

the control target value is increased if the notification is received, and the control target value is gradually decreased if the notification is not received.

Claim 55. (Previously presented): A base station according to claim 47, characterized in that:

if a frame error is detected, the control target value is increased; and

if no frame error is detected, the control target value is gradually decreased to match channel quality to a channel quality target value.

Claim 56. (Previously presented): A base station according to claim 47, characterized in that:

if a frame error is detected, the control target value is increased; and

if no frame error is detected, the control target value is gradually decreased to match a frame error rate to a channel quality target value.

Claim 57. (Previously presented): A base station according to claim 47, characterized in that:

if a frame error is detected, the control target value is increased by a first predetermined value; and

if no frame error is detected, the control target value is gradually decreased such that the control target value is decreased by the first predetermined value in an average time during which a frame error is detected when a frame error rate is set to a desired value.

Claim 58. (Previously presented): A base station according to claim 47, characterized in that:

if a frame error is detected, the control target value is increased by a first predetermined value; and

if no frame error is detected, the control target value is gradually decreased such that the control target value is decreased by the first predetermined value while frames fewer than a reciprocal of a channel quality target value based on a frame error rate by one are received.

Claim 59. (Previously presented): A base station according to claim 47, characterized in that:

if a frame error is detected, the control target value is increased by a first predetermined value, and if no frame error is detected, the control target value is decreased by a second predetermined value; and

a ratio of the first predetermined value to the second predetermined value is determined in accordance with a channel quality target value.

Claim 60. (Previously presented): A base station according to claim 47, characterized in that:

if a frame error is detected, the control target value is increased by a first predetermined value, and if no frame error is detected, the control target value is decreased by a second predetermined value; and

a ratio of the first predetermined value to the second predetermined value is determined in accordance with a channel quality target value based on a frame error rate.

Claim 61. (Previously presented): A base station according to claim 47, characterized in that:

if a frame error is detected, the control target value is increased by a first predetermined value, and if no frame error is detected, the control target value is decreased by a second predetermined value; and

a ratio of the first predetermined value to the second predetermined value is set to a reciprocal of a channel quality target value based on a frame error rate.

Claim 62. (Previously presented): A base station according to claim 47, characterized in that:

if a frame error is detected, the control target value is increased by a first predetermined value, and if no frame error is detected, the control target value is decreased by a second predetermined value; and

a ratio of the first predetermined value to the second predetermined value is set to a value smaller than a reciprocal of a channel quality target value based on a frame error rate by one.

Claim 63. (Previously presented): A base station according to claim 47, characterized in that:

if a frame error is detected, the control target value is increased by a first predetermined value, and if no frame error is detected, the control target value is decreased by a second predetermined value; and

a product of a channel quality target value based on a frame error rate and the first predetermined value is set as the second predetermined value.

Claim 64. (Previously presented): A base station according to claim 47, characterized in that:

if a frame error is detected, the control target value is increased by a first predetermined value, and if no frame error is detected, the control target value is decreased by a second predetermined value; and

a product of a channel quality target value based on a frame error rate and the first predetermined value is equal to a product of a value smaller than one by a channel quality target value based on a frame error rate and the second predetermined value.

Claim 65. (Original): A control station characterized in that:

a check result indicating whether a frame error exists in a signal transmitted from a mobile station to one or a plurality of base stations is received from each of the one or the plurality of base stations; and

the presence/absence of a frame in which no error is detected is determined on the basis of the check result, a control target value for controlling transmission power of the mobile station in the one or the plurality of base stations is increased if there is no frame in which no error is detected, and the control target value is gradually decreased if there is a frame in which no error is detected.

Claim 66. (Original): A control station characterized in that:

a check result indicating whether a frame error exists in a signal transmitted from a mobile station to one or a plurality of base stations is received from each of the one or the plurality of base stations; and

the presence/absence of a frame in which no error is detected is determined on the basis of the check result, and the one or the plurality of base stations is notified of the determination result to increase a control target value for controlling transmission power of the mobile station in the one or the plurality of base stations if there is no frame in which no error is detected, and to gradually decrease the control target value if there is a frame in which no error is detected.

Claim 67. (Original): A control station characterized in that:

a check result indicating whether a frame error exists in a signal transmitted from a mobile station to one or a plurality of base stations is received from each of the one or the plurality of base stations;

the presence/absence of a frame in which no error is detected is determined on the basis of the check result, and if there is no frame in which no error is detected, each of the one or the plurality of base stations is notified of the determination result, and

a control target value for controlling transmission power of the mobile station is increased if each of the one or the plurality of base stations is notified of the determination result, and the control target value is gradually decreased if the base station is not notified of the determination result.

Claim 68. (Original): A control station characterized in that:

a check result indicating whether a frame error exists in a signal transmitted from a mobile station to one or a plurality of base stations is received from each of the one or the plurality of base stations;

each of the one or the plurality of base stations is notified of all check results sent from the one or the plurality of base stations or all check results except for a check result from the self-station; and

each of the one or the plurality of base stations is made to determine on the basis of the check result the presence/absence of a frame in which no error is detected, increase a control target value for controlling transmission power of the mobile station if there is no frame in which no error is detected, and gradually decrease the control target value if there is a frame in which no error is detected.

Claim 69. (Original): A control station characterized in that:

diversity synthesis of signals from a mobile station received by one or a plurality of base stations is performed; and

it is checked whether a frame error exists in the synthesized signal, a control target value for controlling transmission power of the mobile station in the one or the

plurality of base stations is increased if a frame error is detected, and the control target value is gradually decreased if no frame error is detected.

Claim 70. (Original): A control station characterized in that:

signals from a mobile station are received by one or a plurality of base stations;

diversity synthesis of reception signals sent from the one or the plurality of base stations is performed, it is checked whether a frame error exists in the synthesized signal, and the one or the plurality of base stations is notified of the check result; and

a control target value for controlling transmission power of the mobile station which each of the one or the plurality of base stations has is increased if the check result indicates that a frame error is detected, and the control target value is gradually decreased if no frame error is detected.

Claim 71. (Original): A control station characterized in that:

signals from a mobile station are received by one or a plurality of base stations;

diversity synthesis of reception signals sent from the one or the plurality of base stations is performed, it is checked whether a frame error exists in the synthesized signal, and if a frame error is detected, the one or the plurality of base stations is notified of the result; and

a control target value for controlling transmission power of the mobile station which each of the one or the plurality of base stations has is increased if the notification is received, and the control target value is gradually decreased if the notification is not received.

Claim 72. (Previously presented): A control station according to claim 65, characterized in that:

if a frame error is detected, the control target value is increased; and

if no frame error is detected, the control target value is gradually decreased to match channel quality to a channel quality target value.

Claim 73. (Previously presented): A control station according to claim 65, characterized in that:

if a frame error is detected, the control target value is increased; and

if no frame error is detected, the control target value is gradually decreased to match a frame error rate to a channel quality target value.

Claim 74. (Previously presented): A control station according to claim 65, characterized in that:

if a frame error is detected, the control target value is increased by a first predetermined value; and

if no frame error is detected, the control target value is gradually decreased such that the control target value is decreased by the first predetermined value in an average time during which a frame error is detected when a frame error rate is set to a desired value.

Claim 75. (Previously presented): A control station according to claim 65, characterized in that:

if a frame error is detected, the control target value is increased by a first predetermined value; and

if no frame error is detected, the control target value is gradually decreased such that the control target value is decreased by the first predetermined value while frames

fewer than a reciprocal of a channel quality target value based on a frame error rate by one are received.

Claim 76. (Previously presented): A control station according to claim 65, characterized in that:

if a frame error is detected, the control target value is increased by a first predetermined value, and if no frame error is detected, the control target value is decreased by a second predetermined value; and

a ratio of the first predetermined value to the second predetermined value is determined in accordance with a channel quality target value.

Claim 77. (Previously presented): A control station according to claim 65, characterized in that:

if a frame error is detected, the control target value is increased by a first predetermined value, and if no frame error is detected, the control target value is decreased by a second predetermined value; and

a ratio of the first predetermined value to the second predetermined value is determined in accordance with a channel quality target value based on a frame error rate.

Claim 78. (Previously presented): A control station according to claim 65, characterized in that:

if a frame error is detected, the control target value is increased by a first predetermined value, and if no frame error is detected, the control target value is decreased by a second predetermined value; and

a ratio of the first predetermined value to the second predetermined value is set to a reciprocal of a channel quality target value based on a frame error rate.

Claim 79. (Previously presented): A control station according to claim 65, characterized in that:

if a frame error is detected, the control target value is increased by a first predetermined value, and if no frame error is detected, the control target value is decreased by a second predetermined value; and

a ratio of the first predetermined value to the second predetermined value is set to a value smaller than a reciprocal of a channel quality target value based on a frame error rate by one.

Claim 80. (Previously presented): A control station according to claim 65, characterized in that:

if a frame error is detected, the control target value is increased by a first predetermined value, and if no frame error is detected, the control target value is decreased by a second predetermined value; and

a product of a channel quality target value based on a frame error rate and the first predetermined value is set as the second predetermined value.

Claim 81. (Previously presented): A control station according to claim 65, characterized in that:

if a frame error is detected, the control target value is increased by a first predetermined value, and if no frame error is detected, the control target value is decreased by a second predetermined value; and

a product of a channel quality target value based on a frame error rate and the first predetermined value is equal to a product of a value smaller than one by a channel quality target value based on a frame error rate and the second predetermined value.

Claim 82. (Original): A transmission power control method characterized in that:

a signal-to-interference ration of a signal transmitted from a remote station is compared with a signal-to-interference ratio reference value, every time a slot is received, and a control instruction is generated and transmitted to the remote station;

the remote station updates, every time a control instruction is received, transmission power in accordance with the control instruction, and every time a frame containing error detection information is received from the remote station, it is checked whether a frame error exists in the signal; and

the signal-to-interference ratio reference value is increased by SIR_{inc} if a frame error is detected, the signal-to-interference ratio reference value is decreased by SIR_{dec} if no frame error is detected, and a product of a target value of a frame error rate and SIR_{inc} is set as SIR_{dec} .

Claim 83. (Original): A transmission power control method characterized in that:

a signal-to-interference ration of a signal transmitted from a remote station is compared with a signal-to-interference ratio reference value, every time a slot is received, and a control instruction is generated and transmitted to the remote station;

the remote station updates, every time a control instruction is received, transmission power in accordance with the control instruction, and every time a frame containing error detection information is received from the remote station, it is checked whether a frame error exists in the signal; and

the signal-to-interference ration reference value is increased by SIR_{inc} if a frame error is detected, the signal-to-interference ratio reference value is decreased by SIR_{dec} if no frame error is detected, and a product of a ratio of a target value of a frame error rate to a value smaller than the target value of the frame error rate by one and SIR_{inc} is set as SIR_{dec} .

Claim 84. (Previously presented): A transmission power control method according to claim 82, characterized in that upper and lower limits are set in a range in which the signal-to-interference ratio reference value is changed.

Claim 85. (Previously presented): A transmission power control method according to claim 82, characterized in that error detection information is a Cyclic Redundancy Check code.

Claim 86. (Original): A transmission power control apparatus characterized in that:

a signal-to-interference ratio of a signal transmitted from a remote station is compared with a signal-to-interference ratio reference value, every time a slot is received, and a control instruction is generated and transmitted to the remote station;

every time a frame containing error detection information is received from the remote station, it is checked whether a frame error exists in the signal; and

the signal-to-interference ratio reference value is increased by SIRinc if a frame error is detected, the signal-to-interference ratio reference value is decreased by SIRdec if no frame error is detected, and a product of a target value of a frame error rate and SIRinc is set as SIRdec.

Claim 87. (Original): A transmission power control apparatus characterized in that:

a signal-to-interference ratio of a signal transmitted from a remote station is compared with a signal-to-interference ratio reference value, every time a slot is received, and a control instruction is generated and transmitted to the remote station, and every time a frame containing error detection information is received from the remote station, it is checked whether a frame error exists in the signal; and

the signal-to-interference ratio reference value is increased by SIRinc if a frame error is detected, the signal-to-interference ratio reference value is decreased by SIRdec if no frame error is detected, and a product of a ratio of a target value of a frame error rate to a value smaller than the target value of the frame error rate by one and SIRinc is set as SIRdec.

Claim 88. (Previously presented): A transmission power control apparatus according to claim 86, characterized in that upper and lower limits are set in a range in which the signal-to-interference ratio reference value is changed.

Claim 89. (Previously presented): A transmission power control apparatus according to claim 86, characterized in that error detection information is a Cyclic Redundancy Check code.

Claim 90. (Currently Amended): A transmission power control method characterized in that:

reception quality of a signal transmitted from a remote station is compared with a control target value, the comparison result is used for transmission power control on the remote station, and the number of bits in error is checked; and

the control target value is increased ~~in accordance with~~ by a product of a predetermined value denoted as SIRinc and the number of bits in error and decreased ~~in accordance with the~~ by a product of another predetermined value denoted as SIRdec and a number of bits not in error, wherein SIRdec is smaller than SIRinc.

Claim 91. (Currently Amended): A transmission power control method characterized in that:

reception quality of a signal transmitted from a mobile station is compared with a control target value, the comparison result is used for transmission power control on a base station, and the number of bits in error is checked; and

the control target value is increased ~~in accordance with~~ by a product of a predetermined value denoted as SIRinc and the number of bits in error and decreased in accordance with the by a product of another predetermined value denoted as SIRdec and a number of bits not in error, wherein SIRdec is smaller than SIRinc.

Claim 92. (Currently Amended): A transmission power control method characterized in that:

reception quality of a signal transmitted from a base station is compared with a control target value, the comparison result is used for transmission power control on a mobile station, and the number of bits in error is checked; and

the control target value is increased ~~in accordance with~~ by a product of a predetermined value denoted as SIRinc and the number of bits in error and decreased in accordance with the by a product of another predetermined value denoted as SIRdec and a number of bits not in error, wherein SIRdec is smaller than SIRinc.

Claim 93. (Currently Amended): A transmission power control apparatus characterized in that:

reception quality of a signal transmitted from a remote station is compared with a control target value, the comparison result is used for transmission power control on the remote station, and the number of bits in error is checked; and

the control target value is increased ~~in accordance with~~ by a product of a predetermined value denoted as SIRinc and the number of bits in error and decreased ~~in accordance with the~~ by a product of another predetermined value denoted as SIRdec and a number of bits not in error, wherein SIRdec is smaller than SIRinc.

Claim 94. (Currently Amended): A mobile station characterized in that:

reception quality of a signal transmitted from a base station is compared with a control target value, the comparison result is used for transmission power control on the base station, and the number of bits in error is checked, and

the control target value is increased ~~in accordance with~~ by a product of a predetermined value denoted as SIRinc and the number of bits in error and decreased ~~in accordance with the~~ by a product of another predetermined value denoted as SIRdec and a number of bits not in error, wherein SIRdec is smaller than SIRinc.

Claim 95. (Currently Amended): A base station characterized in that:

reception quality of a signal transmitted from a mobile station is compared with a control target value, the comparison result is used for transmission power control on the mobile station, and the number of bits in error is checked, and

the control target value is increased ~~in accordance with~~ by a product of a predetermined value denoted as SIRinc and the number of bits in error and decreased ~~in accordance with the~~ by a product of another predetermined value denoted as SIRdec and a number of bits not in error, wherein SIRdec is smaller than SIRinc.

Claim 96. (Currently Amended): A control station characterized in that:

diversity synthesis of signals from a mobile station which are received by a plurality of base stations, and the number of bits in error in the synthesized signal is checked, and

the control target value is increased ~~in accordance with~~ by a product of a predetermined value denoted as SIRinc and the number of bits in error and decreased ~~in accordance with the~~ by a product of another predetermined value denoted as SIRdec and a number of bits not in error, wherein SIRdec is smaller than SIRinc.

Claim 97. (Original): A transmission power control method in a mobile communication system, characterized in that:

reception quality of a transmitted signal is compared with a predetermined control target value, and the comparison result is used for transmission power control on a remote station; and

it is checked whether a frame error exist in the signal, the control target value is increased if a frame error is detected, and the control target value is decreased if no frame error is detected.

Claim 98. (Original): A transmission power control method in a mobile communication system, characterized in that:

reception quality of a transmitted signal is compared with a predetermined control target value, and the comparison result is used for transmission power control on a remote station; and

it is checked whether a frame error exist in the signal, the control target value is increased if a frame error is detected, and the control target value is decreased if no frame error is detected.